

A Protected Areas Database for the United States

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The U.S. Geological Survey (USGS) Gap Analysis Program (GAP) just published the first version of the Protected Areas Database – United States for submission to the World Database of Protected Areas <www.wdpa.org> on behalf of the PAD-US Steering Committee. This national inventory standardized data from PAD-US Partners GAP, Conservation Biology Institute (CBI), and The Nature Conservancy (TNC) and applied conservation measures to publicly owned open lands. To download or view PAD-US data, visit: <<http://gapanalysis.nbii.gov/PADUS>>.

This database was prepared in collaboration with the PAD-US Partnership, a public-private planning consortium supported by the USGS and the Doris Duke Charitable Foundation. Key groups involved include USGS, The Conservation Biology Institute, the U.S. Forest Service, the Bureau of Land Management, the Land Trust Alliance, and The Nature Conservancy, with coordination provided through GreenInfo Network. The Partnership presented a report outlining future directions for improving the national protected areas inventory in July 2009. More information on the Partnership

can be found at <www.protectedlands.net>.

The long-term vision of the PAD-US Partnership is to provide the guidance and infrastructure to maintain U.S. protected lands data with greater accuracy and detail than previously possible. As an element in this effort, GAP has worked with the World Conservation Monitoring Centre (WCMC) to link PAD-US to the World Database on Protected Areas (WDPA). This linkage will facilitate collaboration among conservation organizations by establishing a consistent understanding of protected lands status, whether the focus is global or local. In addition, the PAD-US will be submitted annually to the Commission for Environmental Cooperation <www.CEC.org> for integration into the North American Environmental Atlas to support continental-scale analyses. By submitting detailed and quality data to the WDPA, the United States sets a standard that should improve reporting

on protected areas throughout the world.

This new protected areas information system reflects GAP efforts to increase collaboration among organizations and share resources. Each of the organizations in the PAD-US Partnership has contributed to the data that are currently available on protected areas. Due to this partnership, it is now possible to envision a mutually agreed upon set of lands and land use classifications that incorporates not only public lands, but eventually can contain any available data on privately protected lands (including easements held by land trusts and others) – such privately protected lands information will be developed cautiously, so as not to violate any privacy concerns. Over the longer term, PAD-US will help provide an understanding of how the combined efforts of public and private landowners have contributed to the conservation of wildlife and habitats across the country, and will enable wider public support for programs that support these efforts.



IUCN Category/Definition ^{ab}	GAP Category/Definition ^{de}
Category Ia: Strict Nature Reserves Strictly protected area permanently set aside to protect biodiversity and also possibly ecological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure preservation of the conservation values.	GAP Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are allowed to proceed without interference or are mimicked through management.
Category Ib: Wilderness Areas Protected area that is allowed to retain its natural character and influence without permanent or significant human habitation, and protected and managed so as to permanently preserve its natural condition.	

GAP, PAD-US, and Conservation Measures

The GAP mission is to promote conservation by providing broad geographic information on biological diversity to resource managers, planners, and policy makers who can use the information to make informed decisions. GAP activities focus on the creation of state and regional databases and maps that depict broad patterns of land cover, land management, and biodiversity. GAP is administered through the USGS.

The protected areas included in the PAD-US include lands dedicated to the preservation of biological diversity and to other natural, recreational, and cultural uses, and managed for these purposes through legal or other effective means. The International Union for Conservation of Nature (IUCN) defines a protected area as, “a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.” Both organizations consider these lands to be essential for conserving species and habitat. The lands in PAD-US also include other types of publicly owned open space areas, whether used for recreational, managed resource development, water quality protection, or other uses.

Since the early 1990s, GAP has been working to map land cover, land stewardship, and predicted vertebrate species distributions—first on a state-by-state basis and more recently on a regional and national basis. GAP categorizes protected areas (see PAD-US map on side 1) as: Status 1—lands managed solely for

biodiversity conservation in perpetuity; Status 2—lands managed primarily for biodiversity conservation but with some management (e.g., suppression of wildfire or activities designed to mimic natural disturbances); Status 3—lands having permanent protection, but subject to extractive uses (e.g., logging or mining); Status 4—lands not managed for conservation or for which there is no information. These are lands not represented as GAP Status 1-3 in the PAD-US map on page 1.

The WDPA is the only global spatial data set on marine and terrestrial protected areas currently available. Since 1981 the United Nations Environmental Programme (UNEP) WCMC, has been compiling information on protected areas and making it available to the global community.

To enable inclusion of PAD-US into the WDPA, GAP applied IUCN classification designations to each parcel in the regional data sets provided by PAD-US partners. The IUCN categories are (see two examples of categories in the figure above): Ia—Strict Nature Reserves—set aside to protect biodiversity and also possibly geological/geomorphological features where human visitation, use, and impacts are strictly controlled and limited; Ib—Wilderness Area—large, unmodified, or slightly modified area managed to preserve their natural condition; II—National Park—managed mainly for ecosystem protection and recreation; III—Natural Monument—set aside to protect a specific natural monument; IV—Habitat/Species Management Area—area managed to protect particular species or habitats and in which management reflects

this priority; V—Protected Landscape/Seascape—protected area managed mainly for landscape/seascape conservation and recreation; and VI—Protected Area with sustainable use of natural resources—protected area managed mainly for the sustainable use of natural resources.

PAD-US is designed to enable database linkage between scales (regional, continental, and global). Protected areas are both uniquely and uniformly identified in the database by name and management designation. In addition, a parcel’s contextual setting is maintained through attributes such as “Class” (Federal, Tribal, City, Private, etc.) and “State Name.” Conservation measures (IUCN categories and GAP Status Codes) are available in addition to a suite of reference information to track data timestamps and sources.

Looking Ahead at GAP

GAP is working towards the creation of a suite of national data sets that can be used for conservation planning and natural resources management across the country. These data include:

- A national land cover map,
- National vertebrate species ranges, and
- A national gap analysis showing which species and ecological systems are under-represented on conservation lands.

For More Information

To learn more about GAP stewardship mapping activities, contact:

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For more information on the PAD-US Dataset, visit <http://gap.uidaho.edu/padus>.